

DietAid - A Telecommunications System for Dietary Counseling

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We have designed and implemented a telephone based diet counselor for use by individuals under treatment for elevated serum cholesterol. It could be used with patients prescribed diet control alone, or diet combined with medication, and under the care of physicians, nutritionists or other health providers. The purpose is to reinforce the variety of behavioral changes required to affect a decrease in serum cholesterol. These include food purchasing, preparation, garnishing and selection of food in restaurants, both sit-down and take-out. The Diet Adherence Intervention for Dyslipidemia (DietAid) system is a computer-based telecommunications system based on the Telephone-Linked Computer (TLC) technology.[1]

Patients can be introduced to DietAid in a health provider's office or in their homes. After instruction (that takes about 15 minutes) they may converse with DietAid as frequently (daily to weekly) as they wish; either the patient or DietAid may initiate the conversation. All users of DietAid will be given a "User's Manual" containing instructions on how to use DietAid, answers to common questions, explanations on how to solve user problems, as well as a call schedule and personal password. DietAid uses computer controlled digitized human speech to converse with the patient. There are six separate conversations, which represent different food groups and topics. In these conversations the DietAid system will inquire about the patient's food consumption and dietary behavior, as well as ask questions to test the subject's food knowledge. The patient responds by using the telephone touch-tone keypad. During the conversation the DietAid system will give feedback to educate and reinforce eating habits that are likely to reduce serum cholesterol. The duration of the

conversation will depend on the foods eaten by the patient, the patient's role in meal preparation and the complexity of their responses to questions. A typical conversation will take about eight minutes to complete. The use of the system entails repetitive cycling through the six conversations in order to maximize the reinforcement of the behavioral changes stressed in each conversation. DietAid is designed to be as human-like and totally automated as possible, in order to make it convenient for the user and eliminate the need for a health professional to take part in its delivery.

Reference

- [1]. Smith MB, Burke KE, Torgerson JS, Stollerman JE, Kern DC, Hardy WL, and Friedman RH. Logical and Efficient Conversations Between Patients and the Telephone-Linked Computer System. In Greenes RA, (ed), *Proceedings: The Twelfth Annual Symposium on Computer Applications in Medical Care*. Washington, D.C., 463-467, 1988.